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1902

MINERAL PRODUCTION OF CANADA

ROBERT BELL, M.D., L.L.D., F.R.S.,
Acting Deputy Head and Director.

SIR,—I have the honour to submit herewith the annual preliminary statistical statement of the mineral production of Canada for 1902.

Although the figures given herewith are, as stated, 'subject to revision' they may still be taken as a very close approximation to those which will be given in the final report.

The completed annual report will follow later, and besides containing a revise of the general table of production, will include other details relating to explorations, development, exports, imports, &c. As much of this information is not available till several months after the close of the year, and the compilation and printing necessarily occupy some time, it cannot be completed till well on in the year following the one covered.

I am, sir,

Your obedient servant,

ELRFIC DREW INGALL.

OTTAWA, February 27, 1903

GEOLOGICAL SURVEY OF CANADA

SECTION OF MINES

SUMMARY

OF THE

MINERAL PRODUCTION OF CANADA

FOR 1902

ELFRIC DREW INGALL, M.E.

Associate of the Royal School of Mines, England, Mining Engineer to the Geological Survey of Canada.

ASSISTANT

J. McLEISH, B.A.

OTTAWA
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1903

[No. 813.]

GEOLOGICAL SURVEY OF CANADA

SUMMARY OF THE MINERAL PRODUCTION OF CANADA IN 1902.

(Subject to Revision.)

Product.		Quantity. (a)	Value. (a)
Metallic.			$
Copper (b)	Lbs.	39,168,202	4,553,695
Gold, Yukon	$14,500,000		
" all other	6,241,245		
			20,741,245
Iron ore (exports)	Tons.	428,901	1,065,019
*Pig iron from Canadian ore	"	71,665	1,043,011
Lead (c)	Lbs.	23,000,000	935,870
Nickel (d)	"	10,693,410	5,025,903
Silver (e)	Oz.	4,373,000	2,280,957
Zinc	Lbs.	166,700	8,068
Total metallic			35,653,768
Non-Metallic.			
Actinolite	Tons.	550	4,400
Arsenic	"	800	48,000
Asbestus	"	31,779	1,191,338
Asbestic	"	8,662	12,114
Chromite	"	900	12,400
Coal	"	7,639,255	15,538,611
Coke (f)	"	506,466	1,538,930
Corundum	"	768	84,468
Felspar	"	7,576	11,375
Fire clay	"	2,741	4,283
Graphite	"	1,095	28,300
Grindstones	"	6,159	48,400
Gypsum	"	332,045	356,317
Limestone for flux	"	293,108	218,809
Manganese ore	"	84	2,774
Mica	"		400,000
Mineral pigments—			
Baryta	"	1,096	3,957
Ochres	"	4,955	30,495
Mineral water			100,000
Moulding sand	Tons.	13,352	27,651
Natural gas (g)			195,992
Peat	Tons.	475	1,663
Petroleum (h)	Brls.	521,485	934,740
Phosphate	Tons.	856	4,953
Pyrites	"	35,616	138,939
Salt	"	63,056	288,581
Talc	"	689	1,804
Tripolite		900	15,800

*The total production of pig iron in Canada in 1902, from Canadian and foreign ores amounted to 357,903 tons, valued at $4,243,545, of which it is estimated 71,665 tons, valued at $1,043,011, should be attributed to Canadian ore and 286,238 tons, valued at $3,200,534, to the ore imported.

(a.) Quantity or value of product marketed. The ton used is that of 2,000 lbs.
(b.) Copper contents of ore, matte, &c., at 11·626 cents per lb.
(c.) Lead contents of ores, &c., at 4·069 cents per lb.
(d.) Nickel contents of ore, matte, &c., at 47 cents per lb.
(e.) Silver contents of ore at 52·16 cents per oz.
(f.) Oven coke, all the production of Nova Scotia and British Columbia.
(g.) Gross return from sale of gas.
(h.) Includes crude oil sold to refiners and oil sold for fuel and other purposes.

SUMMARY OF THE MINERAL PRODUCTION OF CANADA IN 1902.—*Concluded.*

(Subject to Revision.)

Product.		Quantity. (a)	Value. (a)
			$
Structural Materials and Clay Products.			
Cement, natural rock	Brls.	124,400	91,870
" Portland	"	594,594	1,028,618
Granite			170,000
Pottery			200,000
Sands and gravels (exports)	Tons.	159,793	119,120
Sewer pipe			294,465
Slate			19,200
Terra-cotta, pressed brick, &c			348,597
Building material, including bricks, building stone lime, tiles, &c			5,500,000
Total structural materials and clay products			7,771,870
" all other non-metallic			21,245,094
Total non-metallic			29,016,964
" metallic			35,653,768
Estimated value of mineral products not returned			300,000
Total, 1902			64,970,732
1901, Total			66,712,708
1900 "			64,505,137
1899 "			49,584,027
1898 "			38,697,021
1897 "			28,661,430
1896 "			22,584,513
1895 "			20,648,964
1894 "			19,931,158
1893 "			20,035,082
1892 "			16,628,417
1891 "			18,976,616
1890 "			16,763,353
1889 "			14,013,913
1888 "			12,518,894
1887 "			11,321,331
1886 "			10,221,255

REMARKS.

Notwithstanding the most gratifying increase in the total value of the production of non-metallic minerals, the grand total of the value of the production of all the mineral industries of Canada, shews a falling off of 2·61 per cent. This is due not merely to the decrease in the Yukon output of gold of $3,500,000, but also to the very considerable falling off in values of all the remaining metallic minerals other than nickel. But for the large growth of the coal and coke industry, helped by increases in many of the other non-metallic products, the decrease in the grand total, on account of the metallic class would have amounted to nearly 10 per cent. The total of the production of the metallic products, shews a falling off of over 15 per cent, as compared with the equivalent figures for 1901, whilst the non-metallic class shews an increase of over 20 per cent in a similar comparison.

In regard to their relative importance the metallic industries as a group, still occupy the most important place, although not leading to the extent they did in former years. They contributed about 55 per cent of the whole, the non-metallic following with nearly 33 per cent, and the structural class with nearly 12 per cent. Grouping the metalliferous class with coal and coke, about 81 per cent of the value is accounted for.

The following table gives the relative contribution to the grand total of the different mineral industries in comparison with 1901.

1901.		1902.	
Product.	Per cent of total Production.	Product.	Per cent of total Production.
1 Gold	36·17	1 Gold	31·92
2 Coal and coke	17·99	2 Coal	23·92
3 Copper	9·14	3 Building material	8·47
4 Building material	7·71	4 Nickel	7·74
5 Nickel	6·89	5 Copper	7·01
6 Silver	4·89	6 Silver	3·51
7 Lead	3·37	7 Coke	2·37
8 Asbestus	1·89	8 Asbestus	1·85
9 Coke	1·84	9 Cement	1·72
10 Pig iron (from Canad'n ore)	1·82	10 Iron ore (exports)	1·64
11 Petroleum	1·51	11 Pig iron (from Canad'n ore)	1·61
12 Iron ore (exported)	1·14	12 Lead	1·44
13 Cement	0·99	13 Petroleum	1·44
14 Gypsum	0·51	14 Mica	0·62
15 Natural gas	0·51	15 Gypsum	0·55

It will be noted that copper has fallen from third to fifth place; lead from seventh to twelfth. Iron ore exported has advanced two places, but pig iron from Canadian ore is ... eleventh in importance, where last year it ranked tenth. Silver ... ains its position, whilst nickel advanced to fourth.

Product.	Quantity.		Value.	
	Increase.	Decrease.	Increase.	Decrease.
	p.c.	p.c.	p.c.	p.c.
Metallic—				
Copper	3·54			21·99
Gold				14·04
Pig iron (from Canadian ore only)		13·76		13·95
Pig iron (from both home and imported ores)	30·44		20·80	
Lead		55·68		58·39
Nickel	16·37		9·39	
Silver		21·05		30·15
Non-metallic—				
Arsenic	15·27		15·17	
Asbestus and asbestic	0·55			3·67
Coal	22·67		29·43	
Coke	38·56		25·30	
Corundum	82·88		59·03	
Cement	59·64		69·76	
Gypsum	13·02		4·75	
Petroleum		16·21		7·29
Salt	6·10		10·01	

In studying the above table, it will be noted that the shewing made by the metallic class as a whole is in great contrast with that exhibited by the non-metallic class. In the former case, although copper, pig iron as a whole and nickel, were turned out in larger quantities than last year the beneficial results were modified or even reversed by the lower values obtained. In all the other metallics, the heavy falling off in production is markedly aggravated by the fall in values in these instances also.

In the non-metallic class, there is fortunately a more hopeful record. Only in the cases of asbestus, &c., and petroleum do the values show decreases, whilst for all the other items the proportional growth is very marked. Although in several of the industries there has been a falling off in values, in others on the contrary, the increase has been very marked.

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It will be noticed that although the output of pig iron from Canadian ore has fallen off the whole iron smelting industry shows notwithstanding marked growth. Taking the values of the coal and coke produced during 1902, together with those in the allied iron smelting industry, an increase of nearly $4,500,000 is exhibited, shewing a growth in these, the most commercially important industries of the country, more than offsetting the falling off of the $3,500,000 in the necessarily fluctuating product of the placer gold washings of the Yukon Territory.

The per capita value of the total mineral products for 1902 was $11.87 as compared with $2.23 in 1886, the first year for which figures are available.